

# RES MEDICA

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### Abstract

#### MEDICAL EDUCATION

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In the United Kingdom, the General Medical Council is the all-important governing body and their Directive of 1957 has done much to stimulate thoughts and ideas along the lines of revision and re-organisation of the medical course. It is this body which lays down the minimal requirements of a medical curriculum, but in their Directive they delegated much responsibility as to the actual conduct of the course to the individual medical schools, and added their now almost famous rider that there should be less instruction and more education."

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The medical student's own opinions hold but little sway in such alterations at present. However the Association for the Study of Medical Education has recently agreed that it would be at least interesting to tap these ideas. Therefore it was under their auspices that the recent questionnaire was sent out to all medical students in the United Kingdom. The association consists of representatives from all British medical schools and various other individuals interested in medical education and meets in London, but the actual survey is being conducted from the Department of Public Health of Edinburgh University.

On the whole the questionnaire has been received favourably by the students and the response is reported to have been excellent, although the organisers are still anxious to receive the few hundred unreturned copies. A few criticisms may be made of it, for example there is a noticeable lack of questions about teaching methods and the whole thing may be construed by the sceptic to be merely a mass psycho-analysis of the medical student population. It must be realised, however, that space in the questionnaire and the time that may be spent in correlating the results, are at a premium. Also in connection with the first criticism it would be difficult to ask questions about such things without offending members of staff, an occurrence which the Association, as a relatively unofficial body, is anxious to avoid.

An interim report of the survey is expected in about nine months time, but the final fully correlated report, in book form, will not be ready for about

two years, so its effect will not be felt for at least three. The task ahead of the organisers in examining and classifying all the various ideas of 12,000 medical students is, needless to say, protean, so the long time lapse though unfortunate is unavoidable. The report once produced will be sent to all the relevant associations and interested persons and of course to all the medical schools who have taken part, to whom also will be sent private reports containing data applying to them individually. The governing bodies of these medical schools need pay absolutely no heed to this report, since in a sense it is entirely unofficial. However, it is greatly to be hoped and expected that they will do so.

Despite the discouraging prospect of this long time lapse, an interregnum of stagnation need not be anticipated, since the various medical faculties are at present undertaking considerable advances individually. In Edinburgh steps are already being taken to offer would-be students, with suitable marks in 'Advanced Level' G.C.E. examinations, exemption from the 1st Professional course. These arrangements should definitely be employed by 1962 and may be even in the coming academic year. Also in the near future the Medical Faculty will be meeting to take the initial steps in a process of large-scale revision of the rest of the medical course.

The fact that these alterations are being taken in hand before the arrival of the A.S.M.E. report and the apparent lack of authority of the latter when it does arrive, may make it appear obsolete and even impotent. However, as already implied, it is an opportunity for the medical students of this country to express their opinions in a unified and acceptable manner, which otherwise would not have been available to them. The organisers of this survey are also anxious to point out that this recent survey is only a beginning, for they have plans for several other projects e.g. longitudinal studies following students throughout their courses in order to see how their ideas and opinions are modified. This present survey and the future efforts of A.S.M.E. cannot affect the present generation of students to any great extent, but for those in the future it is to be hoped that the medical schools of this country, if not student Utopias, will at least be fitted to provide a medical education, better geared to the wishes and requirements of their students.

## THE CEREBELLUM

Many experiments performed recently to investigate the functions of the central nervous system have suggested for the cerebellum a wide rôle in the overall physiology of movement.

Phylogenetically, the cerebellum appears as an outgrowth of the vestibular nuclei, and has developed in proportion with the cerebrum. Comparative anatomy suggests that the great size of the cerebellar hemispheres is a reflection of the wide range of movement possible to the limb appendages. Ablation experiments performed upon lower animals suggest that the vermis is, by contrast, concerned with the posture and locomotion of the body as a whole. The only agreed function of the cerebellum is that of aiding the regulation of posture and the smooth and accurate execution of movements.

Although certain cerebellar lesions are known to result in the appearance of "intention tremor," its exact causation is unknown. In Rhesus macacus monkeys the most intense tremors and ataxia are produced by lesions of the

dentate and interpositus nuclei. In man, the dentate projection to the pre-central cortex constitutes the bulk of the cerebellar efferent connections.

It has been shown further that the occurrence of ataxia and tremor depends largely on the presence of an intact sensorimotor cortex.

An old idea, now largely substantiated, is that the cerebellum attends to the successful completion of movements initiated by the cerebral cortex. While the apparent regulation of the g-efferent system by the anterior lobe of the cerebellum and multiple somatotopic representation of the body, fit admirably into this picture, sensory representation and visual and auditory projections were unexpected. However the eye and ear do provide important information to be co-ordinated with that from the proprioceptive system in the execution of desired movements.

It is tempting to speculate further and compare the cerebellar control of the afferent input from the muscle spindles with the observed reduction of the post-synaptic intensity of afferent impulses resulting from stimulation of central structures, including the brain stem reticular formation, the sensorimotor cortex and the anterior vermis of the cerebellum.

Whatever the role of the cerebellum, let it be emphasised that in spite of much evidence that is factual and suggestive, the complexity of the problems involved renders much evidence indecisive and precise knowledge is minimal.

### MINIATURE X-RAY IN EARLY T.B.

At present two main methods are in use for the early detection of asymptomatic T.B. Firstly the use of Miniature Mass Radiography (M.M.R.) and secondly the application of Heaf and other multipuncture methods.

The X-Ray is by far the better of the two and theoretically the ideal situation would be to X-Ray all the population every year. However, in Britain at present, this is not possible due to the cost of such a scheme, the lack of machines and an insufficient number of trained staff. Even at present, the units available are unable to satisfy the demand.

The success of the X-Ray campaign depends on a good public support, but recent figures show—

- (a) 90% co-operation was only achieved in one small area and then only after intensive propaganda.
- (b) 70% could be expected with normal propaganda.
- (c) 25% only where little propaganda was used.

When investigating why people did not attend it was found that besides the usual reasons such as lack of time, too far away, etc., a certain proportion refused to go because they felt perfectly fit, and failed to appreciate the presence of an asymptomatic phase of the condition.

This is the really important finding from the survey and indicates much must be done to ensure that no early cases escape detection.

Thus we may ask should an X-Ray be made legally compulsory as in Norway and parts of Australia, in an attempt to find these early cases? However it is doubtful if this is the ideal way. A better idea is to insist on X-Ray at regular intervals for all those engaged in employment which brings them in close contact with a large percentage of the general public. Shop assistants, transport employees, school teachers, nurses, etc., are the groups in whom such regular surveys should be attempted. Regular visits to factories, schools and other such centres is also of the utmost importance.

In many hospitals in the U.S.A. all patients admitted are automatically given a screening X-Ray, surely a scheme well worth serious consideration since this method shows a relatively high incidence of positive findings.

In general then, the efficiency of case finding could be increased by a direct instruction of the public and especially those in the danger groups, and by the most effective use of available resources.

## MEDICINE AND THE LAYITY

Medicine is a subject in which a very large proportion of the general public takes a considerable interest. This is to be expected, since no-one knows when he may need the attention of a doctor. This interest is reflected in the popularity of medical articles in lay publications, and of medical broadcasts. Up to a point, this is not unwholesome; it is all to the good if the public has a general knowledge of hygiene and of the early signs of disease. The virtue of dissemination of information on these topics is obvious.

But the danger always exists that this interest may become too great. The individual who is far too introspective, who carefully studies himself for the first sign of anything abnormal and who in fact, becomes the typical hypochondriac is only too familiar. There is no doubt that one of the chief factors contributing to this sort of personality is the amount of medical information that is published quite unnecessarily in non-medical periodicals.

Recently, in addition to articles in the press, there have appeared "documentary" television programmes dealing with medicine and these seem worthy of discussion. There can be no doubt about the excellent quality of these broadcasts and of their very good intentions. Their dispassionate, matter-of-fact approach to medical matters is a welcome answer to the melodramatic atmosphere that so commonly shrouds these topics in the popular press. Moreover, by demonstrating successfully treated cases, they may reassure patients about to undergo similar treatment and increase public confidence in the medical profession generally.

Numerous pitfalls, however, await those who produce such programmes. For example, it is exceedingly difficult, in the short time available, to explain a fairly complicated disease process and demonstrate its treatment to a completely uninitiated audience; and it often seems quite likely that a broadcast intended to remove some of the mystery from the physician's or surgeon's work will in fact leave the audience more baffled than ever. It is even possible, despite the care that is taken by the speakers to explain, that a patient may be misled into thinking, for example, that surgery is the only, or at least the best remedy for his condition, when it is really undesirable in his case.

Again there is the question of broadcasting film of surgical operations. Although this shows how satisfactory surgery can be in the treatment of certain disorders, many members of the public regard it as rather repulsive. Patients about to undergo similar operations themselves may indeed be quite horrified at the spectacle, and the wisdom of showing this sort of procedure to so wide an audience is a matter for conjecture.

The nature of broadcasting is such that it reaches an exceedingly large audience, especially in this country where choice of programmes is so limited. Also it must be admitted that a serious broadcast of the type in question may have a considerable influence on the opinions of many people. Given that medical broadcasts are desirable, their content must be carefully made up; and most certainly those concerned with their production carry a substantial responsibility both to the public and to the profession.